



# What UNECE does for you

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## UNECE works for energy efficiency



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Energy has been one of the cornerstones of UNECE since it was first established in 1947. Some of the first ECE energy activities were part of post-war reconstruction – pumping water out of flooded coalmines. Thereafter, East-West energy cooperation expanded to include work on coal, electric power and natural gas. Energy security arose as a priority during the 1970s “energy crisis” as east-west energy trade and cooperation allowed western consuming countries to diversify their sources of oil and natural gas supplies away from the Middle East. In the 1980s and particularly in the 1990s, energy-related environmental issues were added to the menu of subjects addressed by the UNECE energy programme.

For more than fifteen years, the Energy Efficiency 21 Project (EE21) has been devoted to achieving sustainable development in the energy sector at a regional level.

### What does your work consist of?

The main effort is to assist Southeast European and Eastern Europe, Caucasus and Central Asia (EECCA) countries to enhance their energy efficiency, diminish fuel poverty arising from economic transition and meet international environmental treaty obligations under the UNFCCC\* and the UNECE. EE21 focuses on developing

\* United Nations Framework Convention on Climate Change

the skills of private and public sector experts at the local level for energy efficiency and renewable energy investments.

It promotes the formation of an energy efficiency market in these countries so that cost-effective investments can provide a self-financing method of reducing global greenhouse gas (GHG) emissions. It will complement other initiatives and assist participating countries to address the financial, technical and policy barriers to energy efficiency and renewable energy investments.



### What exactly is energy efficiency?

Energy efficiency is saving energy in all our everyday activities. It can be related to our own individual activities at home as well as to our business or our contribution in any working area.

By developing and using clean, efficient, affordable energy technologies and adopting energy efficiency policy measures for the longer term, while continuing to improve and deploy the current generation of lower-emission technologies, all

countries will be in a position to meet the energy needs of their people and contribute to climate change mitigation.

In addition, energy efficiency can both reduce import dependency for importing countries while freeing up additional resources for export in energy exporting countries.

Within this context EE21 provides self-financing methods for reducing GHG emissions through energy efficiency improvements that can also reduce import dependencies and alleviate fuel poverty.

### When it comes to energy, we first think of oil. What about other forms of energy?

Any source of energy can be saved and used in a more efficient manner. We can focus on any type of energy source, renewable and non renewable, and not only on crude oil and oil products. It is important to understand that all energy sources can be produced, conserved and used in a more efficient way which contributes to the saving of GHG emissions.

### As part of the UNECE, do you run standardization activities?

EE21 provides advisory services leading to the development of standards to city administrations, local authorities, and the health services that have an incentive to invest in energy efficiency but often lack adequate metering and controls for actual energy use. Specific tools and training material for financial engineering are created through EE21 to facilitate harmonization in formulating investment projects so that they meet banks rules, standards and criteria. UNECE already provides international standards for electronic trade transactions and could do

the same for energy efficiency investments for GHG emissions abatement.

### **How is energy efficiency related to energy security?**

Energy demand is rising markedly, particularly in developing and emerging economies. Global oil and natural gas markets are being affected by social and political tensions and terrorism. By reducing their need for energy, energy efficiency allows countries to be less dependent on importing energy sources from abroad.

Governments are busily opening up and liberalizing energy markets, particularly the electric and natural gas markets, contributing to a major restructuring of energy industries and markets. The changing market fundamentals and energy sector restructuring and consolidation that is taking place, coupled with concerns about energy security, are generating uncertainty, apprehension and some degree of tension among market participants and governments alike. This is further aggravated by concerns over global governance regarding environmental matters, notably climate change.

### **EE-21 is meant to enhance trade and cooperation. How does this work?**

To give an example of EE21 promoting energy efficiency market formation and investment project development — a project on Financing Energy Efficiency Investments for Climate Change Mitigation will provide for the establishment of a public-private partnership dedicated fund to finance energy efficiency investments in UNECE transition economies. This is done through specific partnerships working with civil society, between the public and private sector locally, with east European NGOs and western professional NGOs that serve the business community. It establishes strategic partnerships between the UN executing and cooperating agencies, the private sector, host country authorities and government sponsors in western countries.

Energy efficiency investments developed in the project should provide continuing budget savings for municipalities, hospitals and district heating utilities.

The project focuses on prevention of financial waste and environmental pollution by reducing energy consumption through efficiency improvements. Innovative Internet communications will link local participants, NGOs with private sector counterparts in countries where the Internet is only beginning to emerge as a communications medium. It will allow international investors to assess a range of investment opportunities which can be analysed on-line with value added pre-feasibility information and subsequently bundled together as investment packages. Similar on-line analyses can be performed



by eastern, western and joint-venture companies to assess the market for their energy efficiency products and services in the region and provide opportunities for them to develop local partnerships with the support of host country institutions.

### **How can you achieve your goals while protecting the environment?**

Despite many countries' efforts to reduce GHG emissions, energy-related carbon dioxide (CO<sub>2</sub>) emissions are continuing to rise globally. If one considers that the complete elimination of CO<sub>2</sub> emissions in the United Kingdom would be offset by the incremental increase of emissions in China over just two years, the challenge to stabilize CO<sub>2</sub> concentrations in the atmosphere is indeed huge.

The outcome of the EE21 Project will be solid investments that could represent a reduction of GHG emissions of 10 million tonnes of CO<sub>2</sub> per year, enhanced skills of local experts and policy reforms in participating countries. Hence direct CO<sub>2</sub> emissions reduction for this project stands at 200 million tonnes if we consider a 20 year period, according to UNDP/GEF\* standards. Taking into account the possibility that the Fund is replicated after demonstrating success, direct post project

CO<sub>2</sub> emissions reduction can be estimated again at a 200 million tonnes level over a 20 year period. In terms of indirect emissions reduction, a conservative estimate based on the volume of most cost-effective energy efficiency investments, leads to a CO<sub>2</sub> reduction figure of 600 million tonnes over 20 years.

### **Regarding energy, the countries of the Caspian Sea region are becoming more and more important. Can we talk about energy import dependence of most UNECE countries?**

The energy import dependence of most UNECE member countries will continue to rise in the foreseeable future, particularly for oil and natural gas, increasing their vulnerability to emerging energy security risks. Increased energy exports of the Caspian Sea countries would require significant investments in new oil energy production, in energy transport facilities and new transport corridors. Energy efficiency in the region would have also to be promoted to create a more secure and sustainable future there.

### **How do you create awareness in member countries?**

This could be done in different ways. The most obvious is to talk about the climate change risks that can occur if we don't do anything to improve energy efficiency. We can use different tools to spread this type of information, starting from schools to policymakers. We go through all ranges of society.

Lack of awareness is also evident on the part of national government ministries and local authorities as well as the private sector regarding energy efficiency and renewable energy issues, particularly from the perspective of creating a non-distorted energy market.

### **How do you collaborate with them?**

Under the coordination of the UNECE Sustainable Energy Committee, the work of the EE21 Project is guided and monitored by a Steering Committee composed of delegates from national participating ministries and institutions, international organizations and donor agencies. ✨

For more information visit <http://www.unece.org/ie> and [www.ee-21.net](http://www.ee-21.net) or contact Gianluca Sambucini ([gianluca.sambucini@unece.org](mailto:gianluca.sambucini@unece.org))

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\* Global Environment Facility